

351.79

Date: Friday, 5/25/2007 8:16:43 AM  
User: Kim Johnston

# Process Sheet

Customer	: CU-DAR001 Dart Helicopters Services	Drawing Name	: BLADE
Job Number	: 32583		
Estimate Number	: 10327		
P.O. Number	: <i>N/A</i>	Part Number	: D2741
This Issue	: 5/25/2007 S.O. No. : <i>N/A</i>	Drawing Number	: D2741 REV C
Prsht Rev.	: NC	Project Number	: N/A
First Issue	: <i>N/A</i> Type : MACHINED PARTS	Drawing Revision	: C
Previous Run	: 30556	Material	: <i>N/A</i>
Written By	: <i>[Signature]</i>	Due Date	: 6/10/2007
Checked & Approved By	: <i>[Signature]</i>	Qty:	30 Um: Each
Comment	Est Rev: D 00.11.15 Removed P/O turning - in house processEC Est Rev: E 06-03-20 As Per Rev C JLM Est Rev: F 06.04.20 Added grinding after heat treating E C		

## Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
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1.0	M4130NB0500X03000	4130 Bar 0.5 x 3.0"
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Comment: Qty.: 1.2118 f(s)/Unit Total : 36.3542 f(s)  
 4130 BAR 0.5 x 3.0"  
 Material: 4130 steel bar 0.50" x 3.00"

Batch: *M102647 x 5*  
*M103885 x 18*  
*M101314 x 7 J.F. 07/06/18*

2.0	BAND SAW	BAND SAW
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Comment: BAND SAW  
 Cut blanks 13.850" long +0.063" -0.000"

*SA 07-06-19 30*

3.0	HAAS1	HAAS CNC VERTICAL MACHINING #1
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Comment: HAAS CNC VERTICAL MACHINING #1  
 1-Machine per folio FA108

*SA / BG 07-06-19 30*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Friday, 5/25/2007 8:16:44 AM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: BLADE

Job Number: 32583

Part Number: D2741

Job Number:



Seq. #:

Machine Or Operation:

Description:

4.0

QC2

INSPECT PARTS AS THEY COME OFF MACHINE



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

36 07-06-19

30

5.0

QC8

SECOND CHECK



Comment: SECOND CHECK

J-L 07/06/19

6.0

SMALL FAB 1

SMALL & MEDIUM FAB RESOURCE 1



Comment: SMALL & MEDIUM FAB RESOURCE 1

1-Deburr

SAP 07/06/29

(30)

MF 07-06-29

2-Bend per Dwg D2741

SB

07/06/29

(30)

7.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

Er 07/07/03 (30)

8.0

OUTSIDE SERV.30

OUTSIDE SERVICES-MACH



Comment: Sub-Contracting PURCHASING

Issue P/O:

4084

CL07/07/03

(30)

Harden material as per Dwg D2741

Min. Ultimate Tensile Strength = 152 ksi (30-40 HRC)

Min. Yield Tensile Strength = 141 ksi

Test report or Certification required

9.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Receive and Inspect for transit damage

Ensure Test report or Certification attached

7/2/11 SP

(30x)

counter

10.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

Er 07/07/11 (30)

11.0

SMALL FAB 1

SMALL & MEDIUM FAB RESOURCE 1



Comment: SMALL & MEDIUM FAB RESOURCE 1

Grind off carbon deposits

John 07/07/24 (30)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes ☐ No ☒ DQA: ☒ Date: 02/08/03  
 QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Friday, 5/25/2007 8:16:44 AM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: BLADE

Job Number: 32583

Part Number: D2741

Job Number:



Seq. #:

Machine Or Operation:

Description :

12.0

POWDER COATING

POWDER COATING



M 10 30 68



(30x)

Comment: POWDER COATING

Powder Coat White Gloss (Ref: 4.3.5.2) as per QSI 005 4.3

m-h

07/08/03

13.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

07/08/03 (30x)

14.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: \_\_\_\_\_

07/08/03 (30x)

15.0

QC21

FINAL INSPECTION/W/O RELEASE



(30)

Comment: FINAL INSPECTION/W/O RELEASE

07/08/03

Job Completion



07.08.03

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

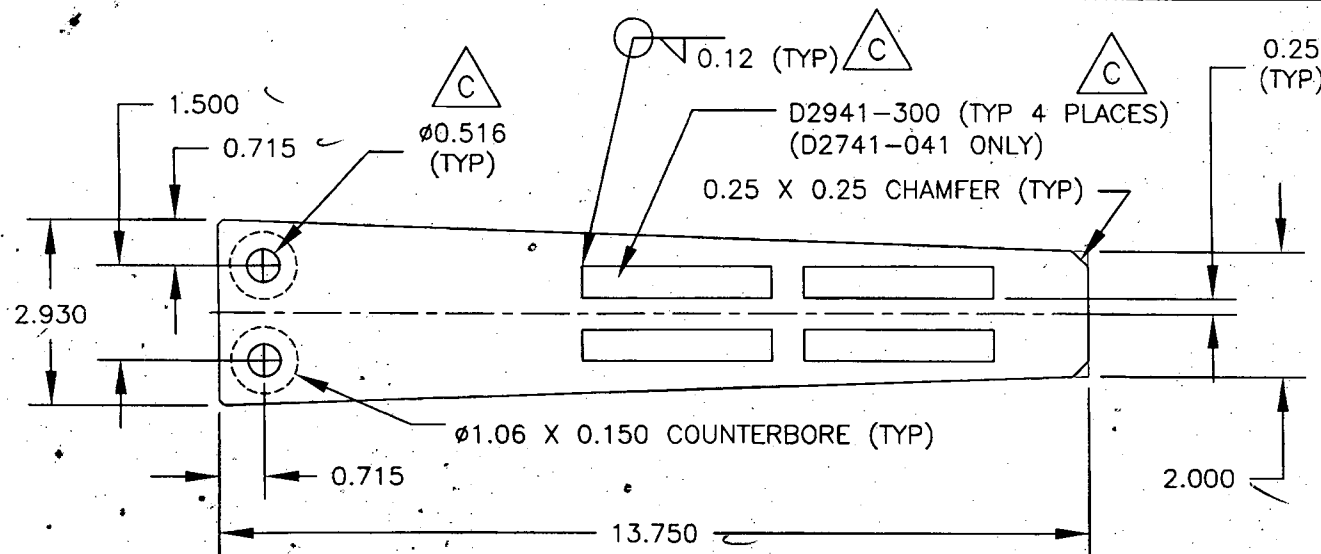
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

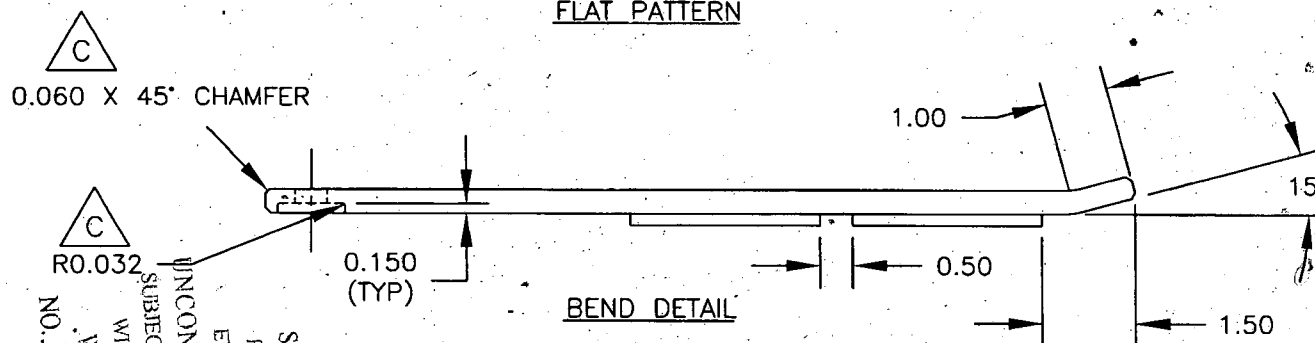


**DART**

RELEASED  
06 02 07



FLAT PATTERN



BEND DETAIL

D2741 BLADE

- 1) MATERIAL: AISI 4130 STEEL 0.375 THICK  
MIN. ULTIMATE TENSILE STRENGTH = 152 ksi (34-40 HRC)  
MIN. YIELD TENSILE STRENGTH = 141 ksi
- 2) FINISH: POWDER COAT WHITE (REF. 4.3.5.2) PER DART QSI 005 4.3
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) BREAK ALL SHARP EDGES 0.030 TO 0.060
- 6) TO MAKE D2741-041, WELD D2941-300 (4) AS SHOWN ABOVE.  
REMOVE POWDER COAT FROM SURFACE OF D2941-300
- 7) TO MAKE D2741-043, WELD 7560 HARDCOAT ROD INSTEAD OF D2941-300

DESIGN	DRAWN BY	DART AEROSPACE USA, INC.
04	04	PORT HADLOCK, WA
CHECKED	APPROVED	DRAWING NO.
06.01.12	98.09.01	D2741
DATE	06.01.12	TITLE
06.01.12	NEW ISSUE	BLADE
A	98.04.16	SCALE
B	98.09.01	1:3
C	06.01.12	LARGER HOLE, ADD RADIUS AND CHAMFER ADD -041/-043 OPTIONS
REV. C		SHEET 1 OF 1



GST No.: R105468102

OAK 88833-1

OFFICE  
15 PEERS ROAD, OAKVILLE, ONTARIO  
CANADA L6L 2X5  
TEL: (905) 827-4171 FAX: (905) 827-7489

2009 WYECROFT ROAD, UNIT B  
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QUEBEC DIVISION  
7450 RUE VÉRITÉ STREET, ST. LAURENT, QUÉBEC  
CANADA H4S 1C5  
TEL: (514) 334-4240 FAX: (514) 334-6269

07/10/2007

MM/DD/YYYY

PAGE: 1

TO: 1DAR01  
IART AEROSPACE LTD.  
1270 ABERDEEN ST.  
HAWKESBURY, ON

SHIP TO: DART AEROSPACE LTD.  
1270 ABERDEEN ST.  
HAWKESBURY, ON

16A 1K7

K6A 1K7

DATE SHIPPED	SHIP VIA	F.O.B.
07/10/2007		ORIGIN
CUSTOMER P/O No.	JOB No.	TERMS
00004084		COD

PART No.	DESCRIPTION	UOM	QTY ORD	QTY SHPD	TEST RESULTS
D2741	B 32583 7/7/11 SP	EA	30	30	
<p>Process Specifications: Procedure: 4161 HARDENED PER DWG. D2741 TO 152 KSI MINIMUM 100% HARDNESS TESTED PER ASTM E-18, HRC: 34-40 MATERIAL: 4130</p>					
<div style="border: 1px solid black; padding: 10px; display: inline-block;"> <p><b>100% HARDNESS TESTED</b> 30 pcs 36/37 HRC</p> </div>					

OK V.A.I.O.  
TH.  
25  
Q.C.

I hereby certify that the material covered by this release note has been inspected and tested and conforms to all specifications relevant thereto in accordance with the conditions of the contract / or purchase order.

ON BEHALF OF VAC AERO INTERNATIONAL INC.

*Gaura Robinson*  
Authorized Q.C. Inspector

V.A.I.O.  
TH.  
25  
Q.C.



VACUUM BRAZING · HEAT TREATING · SPECIAL PROCESSING · FURNACE EQUIPMENT  
TURBINE COMPONENT OVERHAUL · PLASMA AND OTHER COATINGS

HEAT  
TREATING

